

## TABLE OF CONTENTS

Our Challenge.....	D-1
LTS should become a part of RCRA .....	D-1
Create meaningful and effective involvement of citizens and the community.....	D-1
STEWARDSHIP CONSIDERATIONS.....	D-1
1. What is Long Term Stewardship - a working definition .....	D-1
2. Who are the stewards?.....	D-1
3. What will the stewards do?.....	D-2
4. How will Stewardship be funded for the long term? .....	D-2
5. What are the conditions of stewardship? .....	D-2
INFORMATION MANAGEMENT TOOLS AND TECHNIQUES.....	D-4
1. What is Information Management? .....	D-4
2. What kind of information do we need?.....	D-4
3. How will the information system be self-justifying over time to keep the data alive, timely, and easy to access? .....	D-4
4. Where is the information to be located? .....	D-5
5. What about outreach to the public?.....	D-5
6. What about Education? .....	D-6
7. What would be included in a Community "Checklist"? .....	D-6
INSTITUTIONAL CONTROLS: TOOLS AND TECHNIQUES .....	D-7
1. What are Institutional Controls? .....	D-7
2. What would a "Community Checklist" for Institutional Controls look like? .....	D-7
3. What is DOE/Sandia going to do with the land permit status as part of LTS? .....	D-7
4. What types of information management will be needed for Institutional Controls? ...	D-7
5. We determined that Sandia has 3 categories of sites.....	D-7

## FIGURES

Figure 1          Stewardship Values

**Institutional Controls and Information Management Task Group  
Input to Department of Energy (DOE) and Sandia National Laboratories (Sandia/NM)  
Long-Term Stewardship (LTS) Plan  
June 2001**

Draft - Final Report

## **Our Challenge**

Today, we feel more interconnected with all species and the earth. But, we are also of a generation of people, (whose democratic government) has chosen to bury toxic waste in the earth, potentially affecting our soil, our water, and the quality of life of future generations of human and non-human species. What the Department of Energy and Sandia National Laboratories does from now on will have an effect on us the citizens and ultimately it is the citizens that will have to pay (finance?) for this the long term stewardship (LTS) program.

There are ethical issues to be considered. Do we have a right as human beings to contaminate the earth and pass the contamination to future generations?

## **LTS should become a part of RCRA**

As members of the Institutional Control and Information Management Task Group, in order to provide our community with the desired level of environmental protection now and in the future, we must incorporate the LTS program into the State of New Mexico Resource Conservation Recovery Act (RCRA) Permit. Without a legal mandate, it is unlikely that DOE will be successful in obtaining annual funding for an LTS program into the future. As our Presidents and their administrations have vastly different values and interests in LTS, and as the residents of the Albuquerque area will come and go, we choose this strategy-incorporation in the RCRA Permit-as the most viable and effective for protection of ourselves and the generations to come.

## **Create meaningful and effective involvement of citizens and the community**

Equally important for the LTS program to remain viable, the advice and energy of citizens and the community must be utilized, and mobilized. Built into the LTS Program must be a systematic way of calling the public's attention to critical juncture points – yearly reporting requirements, risk levels that are exceeded, repeated events of non-compliance at which time citizen involvement and community involvement is called upon to remedy the situation. As community values and attitudes change, the LTS program must be flexible enough to incorporate these changes.

## **STEWARDSHIP CONSIDERATIONS:**

### **1. What is Long Term Stewardship - a working definition**

Ongoing acceptance of the responsibility and the implementation of activities and processes necessary to maintain and monitor long-term protection of human health and of the environment from hazards posed by residual radioactive and chemically hazardous materials and wastes.

### **2. Who are the stewards?**

Currently, BLM, DOE, USFS, BIA, SNL, KAFB and NMED are the legal stewards and owners of the land on which the sites exist.

- Those affected by the current stewards' decisions such as all citizens of New Mexico (and at the macro level, the citizens of the world). Our stakeholders may at some time become stewards.
- Future stewards could include local governments that may inherit the land in the future and take responsibility for long term stewardship. These may be Bernalillo County, the City of Albuquerque, the Isleta Pueblo, private companies or individuals or others.

### 3. What will the stewards do?

Stewards are responsible for a wide variety of functions that include surveillance, monitoring maintenance, information management, public affairs, institutional controls, physical controls, research, and interaction with other stewards. Stewards must work as partners with the public.

- For example, stewards may revisit residual contamination at some sites.
- They will provide information about the condition and the need for action to the public.
- There may be future potential for recycling at some sites.
- LTS is a process that occurs when cleanup is completed and in passive states, when clean up is not active.

### 4. How will Stewardship be funded for the long term?

We recognize that DOE has the immediate responsibility for funding LTS. Our concern is that over the long term, DOE may cease to exist as we know it, and funding may not be readily available to maintain any stewardship commitments.

- We recommend that the DOE establish a trust fund for the long- term financial stability of stewardship at Sandia National Laboratories.
- Using the example of the Social Security Act, we suggest that the trust fund be secured and not be reliant on annual Congressional appropriations or political contingencies.

### 5. What are the conditions of stewardship?

- Stewardship needs “teeth.” There should be legal restrictions and enforceability that is clear to the public. As mentioned above, incorporation of LTS into Sandia’s RCRA Permit is currently the best method to create a legal mandate. The public’s responsibilities are for the process and rules for maintaining stewardship, not for the residual waste. Stewardship must not be lip service or based on taking credit for actions that would occur even without stewardship.
- Stewardship must be “self maintaining” and not become an “8 track tape” or obsolete approach. It should also be “self-perpetuating; self-correcting; self-funding and self-terminating.” (What we mean to say is that the resources and people must be made available that will allow the stewardship program to react to changing environmental, political, or administrative conditions?)
- It has a timeframe. While the RCRA Permit is enforceable and alive, we can mandate and manage stewardship activities under the Permit as “Near Term Stewardship.” A “Long Term Stewardship” program is implemented when the RCRA Permit is no longer an active legal document.
- **IT MUST HAVE AN ALARM SYSTEM.** When a default or change in plans occurs, an alarm system would send messages to stewards and stakeholders. How do we assure that the community gets good information in a timely fashion that catalyzes controls.

- There must be an information base, which is frequently updated and accessible in many ways and in many forms to the public.
- The New Mexico Environment Department should provide an active and on-going oversight function to ensure environmental surveillance milestones and activities are completed according to plan.
- It is important that there is ongoing local public influence and participation during Sandia's stewardship program. Long-term reliance on state and federal agencies to effectively appreciate and respond to local concerns seems unwise. The need for public understanding and attention to long-term stewardship warrants the establishment of a stewardship citizen's board.

This graphic of the Information Management/Institutional Controls Stewardship Values was developed as a way for this task group to show the interconnected relationships between the Legal/Regulatory framework, funding mechanisms, community involvement and advances in technology.

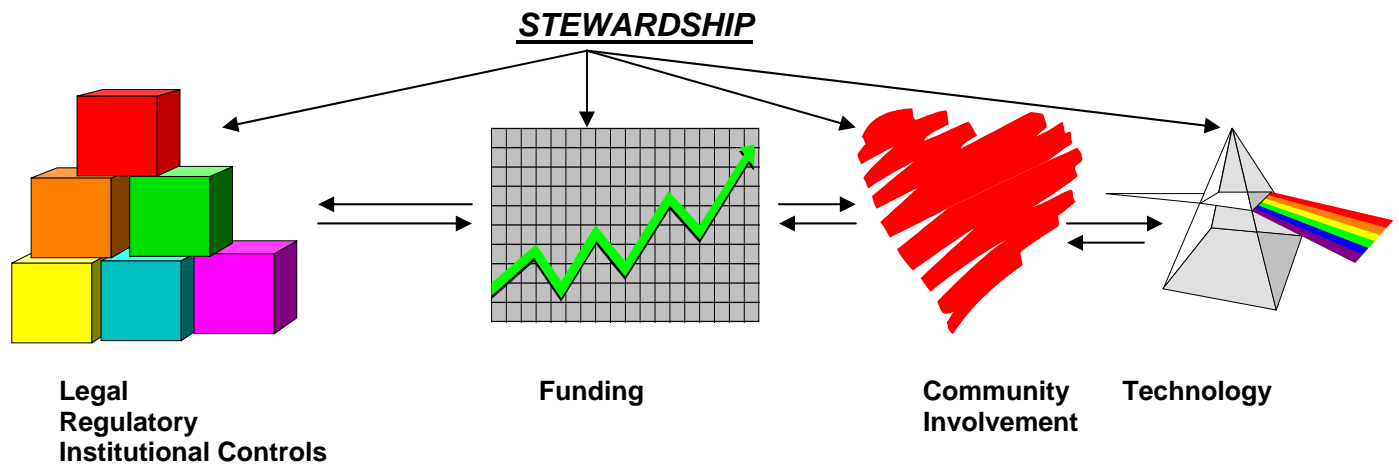


Figure 1 Stewardship Values

- Each of these four areas requires unique information for management/tracking

Some guiding principles about information:

- **INFORMATION MUST BE UNDERSTANDABLE** (Litmus test: be able to explain to your spouse)
- Information must inspire confidence and trust
- Information must be available in different forms for different users (reports, placards, videos, computers, signage, symbols and possibly a 3D model of sites)
- Information must be stored in a variety of public places (kiosks, public libraries, websites, telephone hot lines, DOE banks, archives)
- Information should create a sense of urgency and raise a red flag using some symbol and other visual designs as a way to preserve long-term memory of the sites and what is in them.
- Information must be timely and a system of updating must be used
- Information could be displayed as a check-list for stewardship activities as a way of ensuring that LTS commitments are being met

Sandia and DOE would need to create an LTS program that can anticipate the future when one of the following conditions prevails:

- When there is no permit
- When the land contaminants change
- When land ownership changes
- When zoning regulations change
- When the President or Congress runs out of interest and/or funds
- When there are unintended consequences
- When once cleaned (2001), is later to be found contaminated (2016)

## **INFORMATION MANAGEMENT TOOLS AND TECHNIQUES**

### **1. What is Information Management?**

Information management is the tools and techniques used to manage all the different types of information about the sites entering into long-term stewardship. This would include paper documents, electronic documents, maps, sampling records, records of public interactions, etc.

### **2. What kind of information do we need?**

- Information about the remaining health and safety risk at sites,
- Residual level of contaminants,
- Monitoring data,
- Engineering controls, and
- institutional controls

This information should be made available to affected governments and the public in a variety of formats and levels of detail so that individuals are able to use the information to inform themselves at whatever level of specificity or technical sophistication they desire.

Information should be available in the form of:

- Maps
- Fact Sheets
- Graphic representation
- Complete technical reports
- Progress Reports
- Monitoring reports
- Internet access points – to various linked information sites on stewardship
- Symbols
- Placards
- 3-D models
- Textbooks for all levels of education

Because the public does not differentiate between Kirtland Air Force Base and Sandia, information portals of all types should include stewardship information for both DOD and DOE properties. The LTS Program must be able adapt to information technology changes.

### **3. How will the information system be self-justifying over time to keep the data alive, timely, and easy to access?**

This task group was concerned that unless a solid community-based reason for keeping this data is perpetuated, this information management system, would lose its reason for existence, and

end up dying of neglect. To help ensure perpetuity, information management requirements should become part of the RCRA Permit conditions.

#### **4. Where is the information to be located?**

- An internet website designed and managed as a stewardship information resource
- Kept on site - or in close proximity to the site and be made available to the public
- Within the community –
  - Museums – have a history of keeping information accessible
  - Public reading rooms – i.e. in a storefront reading room in a mall not just at a library
  - University archives
  - Public libraries
- Site-specific records also in a national archive
- In our local Native American Pueblos. The Pueblos have been here much longer than SNL/DOE. They need to help us remember the stewardship sites.
- In local governments to link DOE environmental contamination information into the local GIS and record-keeping systems.
- Artistic creativity is an essential component for community “remembering.” In all cultures where ideas/issues/locations are passed on through the generations, some type of artistic creation is used as a memory device. Stories, paintings, sculpture, renderings, etc., all help the “collective memory” remember.

#### **5. What about outreach to the public?**

The overall consensus is that we need to do more outreach to get additional community members participating in LTS.

Some suggestions are to contact:

- Public Officials in Bernalillo, Sandoval, Valencia Counties
- Public Officials in the City of Albuquerque, Rio Rancho
- Public Officials at Isleta Pueblo
- NM Board of Realtors
- NM Council of Churches
- Educational Community
- Chamber of Commerce
- Health practitioners
- Neighborhood Groups, particularly in the San Jose/South Valley corridor.
- Kirtland Air Force Base Officials
- Children, the next generation!
- Peace and Justice Center
- Citizen Action groups

An informed community is better able to act and react to situations involving the sites under stewardship.

Citizens and non-governmental organizations should be encouraged and funded to monitor and enforce long-term stewardship commitments. Members of the public and non-governmental organizations can be effective supplements to governments' monitoring and enforcement programs.

## **6. What about Education?**

Stewards are developed over time. In order to keep the idea of stewardship alive we must start educating our public about the long-term impacts of stewardship (especially if stewardship were to be abandoned). Education should include information about the potential risks posed by residual contamination and about methods of avoiding those risks, including compliance with institutional controls. Institutional controls and long-term stewardship depend to a certain extent on individuals knowing about land-use restrictions, warnings and risks. The better educated the affected public is about these restrictions, the more likely they are to avoid the risk.

We would like the DOE to consider these areas for educational outreach:

- Modules on stewardship in the Albuquerque Public School curriculum
- A university-based program on stewardship
- The development of a DOE course on environmental stewardship as part of the DOE Nuclear Weapons School
- Providing information and briefings to any community group
- Giving tours of the toxic waste sites
- Distribution of a Community Check list
- Articles in newspapers, bulletins on radio and TV

## **7. What would be included in a Community "Checklist"?**

One way of instilling confidence that Stewardship is working, is the development of a "Community Checklist", to serve as a "report card" on stewardship activities. This checklist would be one way the public could determine if DOE's commitments to stewardship are being met. Below is a sampling of the types of questions such a check- list may have:

- In this year did DOE fund Stewardship adequately?
- Are all the monitoring programs adequately funded so that the goals for monitoring are met?
- What were DOE's stewardship education goals for this year?
- Were they met? Notate the goals.
- What did DOE do for community outreach with regards to stewardship this year? List examples.
- Which sites were monitored? What were they monitored for?
- Where is the monitoring report?
- Are the physical barriers still in place
- Has the signs at each site been checked? Have any been replaced?
- What was placed at the public reading rooms? Museums?
- Is the Internet access point kept up to date?
- Is DOE keeping statistics on information use – to determine if the "right types" of information is available to the public?
- What aspect(s) of Stewardship are DOE out of compliance on? Have they created a "corrective action plan" to eliminate the non-compliance?
- What else is needed?

## **INSTITUTIONAL CONTROLS: TOOLS AND TECHNIQUES**

### **1. What are Institutional Controls?**

An institutional control is a legal or institutional mechanism that limits access to or the use of property or warns of a hazard. And institutional control can be imposed by the property owner, such as use restrictions contained in a deed or by a government, such as a zoning restriction.

Signs are not considered to be an institutional control, but are a physical control used as part of a developed institutional control.

Although this Task Group recognizes that Sandia is located on KAFB which is federal property, we are concerned about land transfers in the future to other governments or private concerns, and about the viability of institutional controls relying on record keeping of land use.

We have created a proto type "Community Checklist" of the types of activities that we, the public, would like incorporated into the LTS Plan. We must be assured that the institutional controls put into place at DOE/Sandia will help us maintain confidence that the ICs are working and remain appropriate for a given site.

### **2. What would a "Community Checklist" for Institutional Controls look like?**

- Demonstrate compliance with regulatory requirements and track required activity milestones
- Monitor for public safety
- Ensure restrictions are transferred with land ownership change
- Prevent physical access to sites
- Prevent intrusion to physical barriers Prevent compromise of barriers
- Avoid exposure short term/long term
- Avoid creating an alternative pathway for migration of contaminants to receptors
- Limit uses to those compatible with future use designation
- Limit exposures
- Limit liability by controlling materials used on site
- Manage the use of groundwater as appropriate
- Keeping stake holders informed
- Planned and predictable stakeholder/manager information exchange
- Capture appropriate Characteristics of specific sites
- Monitor the appropriateness of the chosen institutional control for each specific site

### **3. What is DOE/Sandia going to do with the land permit status as part of LTS?**

The land status of the (29?) Un-permitted ER Sites on KAFB Land must be resolved as part of the SNL stewardship program.

### **4. What types of information management will be needed for Institutional Controls?**

- Establish information categories to help drive the institutional controls process
- Look at each site, or similar group of sites, and recommend institutional controls. At the same time make notes on the information requirements of these sites.

### **5. We determined that Sandia has 3 categories of sites:**

1. **High profiles sites** – CWL, MWL, CAMU -- these will have the most attention



2. **Potential to slip through the crack sites** – sites not cleaned up to background, but still a hazard, but are not “glamorous” enough to warrant much public attention. These sites concerned this task group the most because they could easily be forgotten over time.
3. **The Non-issue sites** – the sites that have been cleaned up to background and no residual contamination remains. They currently have no further action (NFA) status on the HSWA Permit.

We noted that the signed and fenced and signed sites should not be neglected—these sites in the future could be potentially used and must not be forgotten because they are most likely to be re-used by someone else in the future.